

March 5, 1985

To the Comal80 Standardisation Group

In extension to the earlier proposals from the three Danish manufacturers we would like to clarify and adjust the proposed semantics of the print separator. Point 14 in the proposals should be changed to:

14. Add the following semantics in front of the semantics following production 129:

If the print separator is comma the printline is divided into print zones. The zone width is determined by the zone statement. The default zone width is 0. An odd sized zone may occur at the end of the print line.

Printing zone divided lines may be compared to using the tabulator key on an ordinary typewriter. This means that after a printelement is output the tabulator key is pressed. As a consequence of this the next printelement starts in the leftmost position of the next zone, and that printing a print element of the same length as the zone width leaves the following zone space filled. Zone width 0 means that no spacing between print elements occur.

A semicolon used as print separator is output as one space.

The effect of a <print end> is the same as of a <print separator>. If no <print end> is specified, printing is continued in the first position on the next line.

A print statement with no <print list> causes output of a newline.

Also, in order to complete the removal of <dev info> we propose:

18. The delete statement is changed to

121. <delete statement> ::= DELETE <file name>

Finally, since the kernel does not include an end statement:

19. The keyword END is excluded from the list of reserved words in appendix C.

From Bill Hyland we received a summary of the comments made on the standard at the Cambridge meeting. On behalf of this summary we propose the following clarifications to the standard kernel.

20. Add the following semantics to production 100 concerning string assignment:

If the string variable is given without a substring specifier:

If the length of the string expression is bigger than the length of the string variable the string expression is truncated to the right.

If the string expression is shorter than or equal to the length of the string variable the value is assigned and the actual length of the string variable is set to the length of the string expression.

If the string variable refers a substring:

If the length of the string expression is bigger than the length of the substring the string expression is truncated to the right. If the string expression is shorter than the substring the remaining part of the substring is space filled.

If the start index for the substring is bigger than the actual length of the string variable + 1 a runtime error occur.

21. Concerning underflow and overflow of real expressions:



If an evaluation of a real expression results in underflow the value is set to zero. If the evaluation results in overflow a runtime error occurs.

22. Add to production 119 the semantics:

If the type of the variable in the read statement is incompatible with the type of the value in the data statement a runtime error occurs.

23. Change production 126 to:

```
126. <print element> ::= <expression> |  
                        <tab function> |  
                        <at function>
```

```
<at function> ::= AT(<row>,<column>)
```

```
<row> ::= <numeric expression>
```

```
<column> ::= <numeric expression>
```

An at function causes the cursor to be placed at the indicated row and column before printing the next element.

The top line of the screen is row number 1. The leftmost character position in a line is column number 1. The number of the bottom line and the rightmost character is dependant on the actual device. If row or column exceed the boundaries a runtime error occurs. When printing on a device that is not a screen the at function is ignored.

24. Change production 101 to (see earlier proposal):

```
101. <input statement> ::= INPUT [AT (<row>,<column>)]
```



```
[<string constant>:]  
<variable> [<print end>] ;  
INPUT FILE <file designator> :  
<variable list>
```

25. In the semantics for production 129 change "negative" to "not positive". This means that TAB(0) produces a runtime error.
26. Change the 4th statement of the semantics for production 133 to:

If no point is specified neither the decimal point nor any fractional part is printed.
27. Appendix A, rule 12: Change "integer" to "integral".
28. Add to the semantics for appendeix A, rule 14:

ORD taken of an empty string returns the value 0.
29. Appendix B, rule 15.4: Change "default string length of 40" to "default string length of at least 40".

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